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News & Views

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Year 2000 — Solution Design

Articles in the past two *News & Views* described the first phases of a Year 2000 compliance project — inventory, assessment, and impact analysis. With the information gathered from those tasks, the organization is ready to determine strategies for making each system compliant. The options include: retire, replace, rewrite, redeploy, and repair.

Retire

There may be some systems that can be retired because they are determined to be redundant, obsolete, unnecessary, or simply not worth the effort to make compliant. While this is the simplest solution for non-compliant systems, it is not likely to be a viable alternative for many systems.

Replace

This refers to replacing an existing system with a vendor package. While this may seem an appealing option, particularly in time-constrained circumstances, there are some drawbacks. Vendor packages will almost never meet all of your requirements. Before purchasing, make sure the vendor package has the core functionality that is absolutely required. Also, if customization is needed, confirm that the modifications can be implemented within project time frames. Use of a vendor package may require changes in current operational processes, and is also likely to alter the end-user interface with the system. The closer the package comes to replicating the look and feel of the current system, the easier it will be to implement. To help overcome organizational resistance to change, it is important that the business unit and end users are involved as the product selection is made, and that they are informed and trained as the transition occurs.

Redeploy

This alternative refers to migrating the current system to a new platform or environment (e.g. a COBOL mainframe system to an Oracle client/server platform). Among all options, this has the potential

INSIDE

to add the greatest value to the organization, and will thus be appealing to management; but it is also likely to be the most expensive, time-consuming, and highest risk alternative. *Use caution in selecting a strategy that has you rewriting to a new hardware platform or software environment for the FIRST time.* In addition to acquiring new hardware and development software, it will also require developing new skills and providing new training for both end users and support staff.

Rewrite

The benefit of rewriting the current system is that it should reduce future maintenance requirements by providing an opportunity to make technical and functional improvements to the system. If use of this strategy is not preceded by a reengineering of business processes, it may be a waste of resources to some degree.

Repair

Repairing the existing system will be the most viable option for many systems. The objective is to limit changes to only those that are required to fix the date problem. This generally makes repair the least expensive solution. Some of the advantages of this alternative are that it's transparent to end users; it preserves the investment in the current software; and it can be easily outsourced.

There are two approaches to system repair: data expansion and program logic. Data expansion refers to physical expansion of date fields from current two-digit years to four-digit years. This solution permanently fixes the problem, but it is also the most costly and time consuming alternative. In a program logic (or date windowing) approach, changes are made to the programs and not the data. Logic is added to a program that enables it to interpret the correct century from the two-digit year in the file. The pros and cons of these two strategies will be explored in detail in a future *News & Views* issue.

Summary

Resource planning will be a critical element in choosing compliance strategies. The earlier phases have identified the problem scope, system exposures, priorities, resource requirements, and skill sets needed. Now it's time to blend organizational objectives with the availability of time, personnel, and monetary resources to meet those requirements.

Be realistic in solution design. The solutions that may be the most appropriate from a long-term perspective may not be the most prudent given time and resource constraints. What is your historical track record in meeting project deadlines? Remember that the Year 2000 presents a deadline that is both unmovable and unavoidable.

For more information, contact Dan Sidor, Year 2000 Coordinator, of ISD's Policy, Development & Customer Relations Bureau at 444-2029, ZIP!, or E-Mail at dsidor@mt.gov.

Calendar of Events

February 5
Information Technology Managers Group (ITMG)
8:30- 10:30 am, Rm 111, Metcalf Building

February 20
Public Safety Communictions Task Force (PSCTF)
1:00-4:00 pm, Helena location TBA

Note:
The Information Technology Advisory Council (ITAC) is not scheduled to meet until April 1997

Information Technology Managers Group (ITMG)
March 5, 8:30-10:30am, Room 111, Metcalf building

Year 2000 Utilities

YEAR2000.EXE May Need to be Licensed

Published in *News & Views*' November 1996 issue, the feature article, "Your PC May Not Make it into the Next Century," states that the YEAR2000.EXE utility is a freeware program. However, that is not 100% correct. For personal use, permission is granted to freely copy, distribute and use this program in its complete, unmodified form, including the text file. In business service, this program may be used only for evaluation; a low-cost, licensed version of the program is available.

For your convenience, this utility can be found on the ISD Value Added Server (VAS) at DOA_VAS_001\SYS:GUEST\YEAR2000, along with other Year 2000 utilities. You and/or your agency are responsible for ensuring that you are running licensed versions. *(Note: ISD may be purchasing a site license — please contact us before you purchase any licenses.)*

A New Utility to Test the System Date Compliance for PCs

The year 2000 presents several problems to computer users. The DOSCHK.EXE utility is a program that will check for one of them, namely the DOS rollover problem. The utility sets your system clock to just before midnight on December 31, 1999; waits until the system rolls past midnight; checks your PC's settings; reports its findings to you; and then resets the PC clock back to normal. This utility is a simple way for you to check if your PC will rollover its date to January 1, 2000. The utility also defines some additional year 2000 concerns such as which uses may fail, which kinds of computers or software will fail, what you can and should do, why you shouldn't wait until next year, and "special date" problems.

Until DOSCHK came along, the accepted method of testing for the system date rollover problem was to set the clock using DATE and TIME; switch off the PC and wait several minutes; and then switch on the PC and use the DATE to check if it displays January 1, 2000. DOSCHK is an easier method for verifying the problem. In the course of testing, it was discovered that the manual method wasn't as reliable as had previously been thought. In particular, some newer machines which appeared to work correctly were found to still record the new date as 1900-01-01 in their real-time clocks.

DOSCHK is now the most reliable test of system date compliance for PCs. For your convenience, this utility can be found on the ISD Value Added Server at DOA_VAS_001\SYS:GUEST\YEAR2000, along with other Year 2000 utilities. For personal use, permission is granted to freely copy, distribute and use this program in its complete, unmodified form. For business use, the program may only be used for evaluation purposes. A low-cost, licensed version is available for business use. *(Note: ISD may be purchasing a site license—please contact us before you purchase any licenses.)*

For more information, see the feature article, "Your PC May Not Make it into the Next Century," in *News & Views*' November 1996 issue; or contact Kathleen Androlewicz of the Telecommunications Operations Bureau at 444-9645, ZIP!, or E-Mail at kandrolewicz@mt.gov.

For your convenience, this utility can be found on the ISD Value Added Server (VAS) at DOA_VAS_001\SYS:GUEST\YEAR2000, along with other Year 2000 utilities.

MT PRIME Update

Deloitte and Touche Completes Phase I

On December 6, 1996, the Montana Project to Reengineer the Revenue and Information Management Environment (MT PRRIME) Steering Committee held its final Phase I meeting with Deloitte and Touche. Geoffrey Cann and Ed Smith, both of Deloitte and Touche, reviewed the Systems Directions Recommendations, the Business Case for Systems Renewal, and the Implementation Strategy and Plan. They recommended that the State purchase new software for our core administrative systems and use this software to enable process reengineering. In addition, they recommended an aggressive acquisition and implementation schedule of about 18 months.

The Business Case provided by Deloitte and Touche identifies many benefits the State will realize with our new core processes. While better information, less duplication, and consistency are important goals, specific FTE

reductions will be the primary economic benefit. Since more than 600 employees perform "core" functions, Deloitte and Touche expects that the minimum 68 FTE reduction will be easily achievable with reengineered processes.

Steering Committee Agrees

The Steering Committee accepted the Business Case and underscored the imperative for change in two actions. First, the Committee went on record supporting the utilization of 25 existing staff to assist with the implementation of MT PRIME beginning in July 1997. Second, the Committee agreed to support a 68 FTE reduction in the 2000 biennium as the efficiencies associated with the new system are realized. These actions make MT PRIME cost neutral in the short term and the generator of annual savings exceeding $2 million over the long term.

The Executive Branch is making a strong statement to the Legislature that these new core management systems will both improve government operations and achieve real efficiencies.

Agency Analysis Recommended

With these major changes being planned, a few questions might be in order. Does your agency have any of the more than 100 systems that interface with, or otherwise relate to, our core systems such as SBAS, PPP, and PAMS? Over the next year or so, do you plan on doing any work related to how your systems interface with these core systems? Or will you be developing a system to provide you with some core administrative functionality? We certainly don't want to stop anyone from doing what they need to do, but the Deloitte and Touche Implementation Strategy and Plan has the State implementing new, commercially available, software for our core systems in the fall of 1998. Times are hard enough without pouring money down the drain; therefore, agencies should review and analyze their IT expenditure plans with the view that substantial change to the core systems will be occurring in the near future.

The Journey Has Begun

Phase I of MT PRIME has started the State on a new journey. We are loading our wagons and heading across the prairie bound for reengineering and a single-package, core, administrative system. En route, we will be requesting a replenishment of supplies from the Legislature, and we'll be formulating broad requirements about what our destination should provide in the way of finance, budget, human resources, and fixed-asset management. Six months from now, we will be checking our maps and selecting one package for implementation. As we approach our destination, we will encounter a variety of natural and man-made dangers. But if we work hard and persevere, we can avoid becoming lost in the wilderness. It's going to be a great trip. Let's go!

For more information regarding MT PRIME, contact these Dept. of Administration staff: Dave Ashley at 444-2032, ZIP!, or E-Mail at dashley@mt.gov; or Ed Glenn at 444-2916, ZIP!, or E-Mail at eglenn@mt.gov.

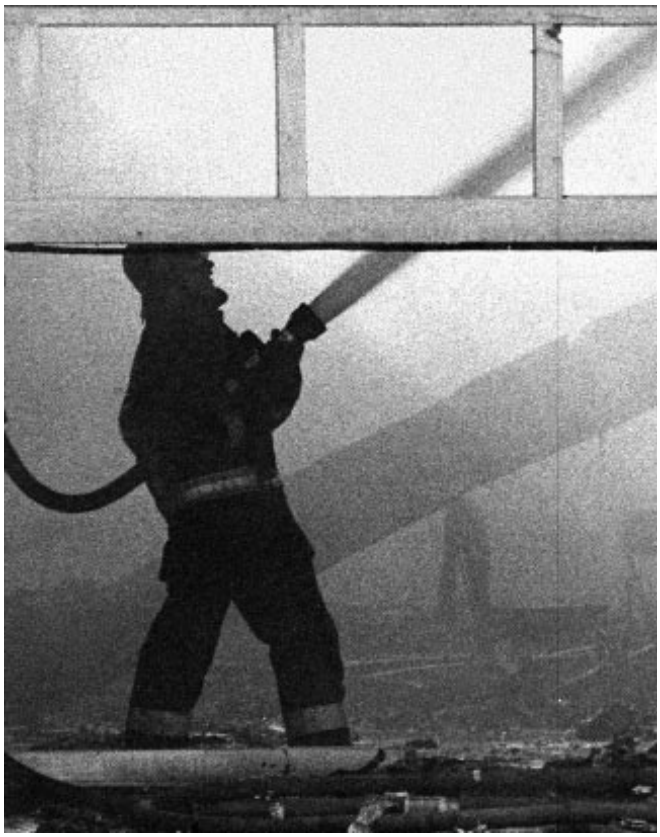
Disaster Recovery Report

At the December ITMG meeting, Leslie Cummings presented a report titled "Disaster Recovery: ISD's History and Future Direction." This report contained: statistics and information highlighting the importance of disaster recovery (DR) planning; common mistakes and pitfalls; history of the State of Montana's disaster recovery planning efforts; and future planning (such as drills, business continuity, and resource requirements). Resulting meeting discussion focused on the need for: expanded network recovery and testing; agency involvement; expanding current testing efforts (such as including mid-tier and client server-applications, and business continuity); and high-level management commitment. This report can be viewed from the ISD home page at http://www.mt.gov/isd under Strategic Planning, Initiatives.

In support of Montana's disaster recovery efforts, ISD bureau chiefs and supervisors held a special meeting to consider agency objectives submitted for the drill this May, and to determine the scope of the 1997 spring and fall drills. It was determined that the spring drill dates will be used to develop telecommunications/network disaster recovery plans and testing of network "basics." This will include working with Weyerhaeuser staff to identify configurations and capabilities for ISD and the hot site; meeting with agency DR contacts to determine specific test needs; and recovery of basic telecommunications/network functions at Weyerhaeuser. These testing efforts will determine network connectivity and identify problem areas in

preparation for the fall drill. In addition, the Disaster Recovery Coordinator will be testing administrative segments of the ISD disaster recovery plan in May. A majority of these testing efforts will include safety considerations; verification of administrative functions (such as contacts, vendor agreements, and public relations procedures); and verification of hot- and cold-site facilities and functions. The Coordinator will also be meeting with agency DR contacts to provide guidance for agency DR plan development, implementation, and maintenance.

The fall drill has been scheduled for November 6-9, 1997. Agencies who submitted requests for the spring 1997 drill will be given first priority for testing in the fall. The focus will be on telecommunications/



network systems and functions, and will involve testing from NCP8, NCP11, and SummitNet. ISD's System A (mainframe) will be fully restored and available for application systems testing. Agencies wishing to test AS400 platforms are also invited to participate. Departments that have expressed an interest in testing their environments include: Administration; Corrections; Fish, Wildlife and Parks; Justice, Revenue; and Transportation. Other agencies wishing to participate in the fall drill, or desiring additional information, should contact these Computing Policy & Development Section staff: Leslie Cummings at 444-2469, ZIP!, or E-Mail at lcummings@mt.gov; or Brett Boutin at 444-0565, ZIP!, or E-Mail at bboutin@mt.gov.

Public Safety Communications Program Implements Spectrum Management System

ISD's Public Safety Communications Program has recently implemented the Spectrum Management System (SMS). The SMS runs under ArcView® on a Windows 95 PC that is optimized for 32-bit operation. The SMS uses the commercial, off-the-shelf, geographic information system (GIS) to generate radio transmission propagation models to predict radio coverage and analyze communications systems.

Using the ArcView system provides a versatile tool for creating a variety of maps. Standard overlays for roads, boundaries, waterways, and a wide variety of other GIS-based information are available to add to any study (see Figure 1). In addition, queries can be made using the analysis tools included in the system, thereby allowing the full power of a true GIS. Although capable of generating simple, paper map displays, the SMS uses the powerful capabilities of the GIS system to answer questions like these: How many miles of secondary highway are within a given radio site coverage? What is the population density served by the coverage area?

"I think there is a world market for about four or five electronic computers."

- Thomas Watson IBM, 1943

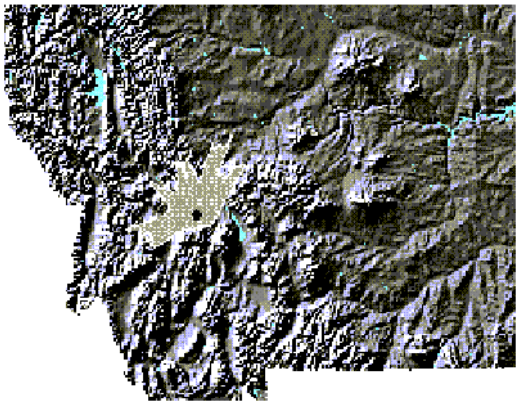


Figure 1: Example of a Relief Map Created Using the SMS

Associated with the SMS is a database including all of the FCC-licensed, land-mobile radio operations. This database allows search and display of existing information in a graphic environment. Terrain analysis can also be performed and displayed in a number of formats to demonstrate that information.

The coverage propagation engine evolved from a previous UNIX-based system on a SUN Sparc workstation. The resulting package was modified and integrated into the ArcView® 3.0 program under a contract with GeoSpecrum, Inc. of Helena.

The SMS will be used to assist in planning and design efforts as part of the Public Safety Communications Program's effort to support State and local agencies in all of their public safety communications requirements. For more information, contact Ron Haraseth of the Policy, Development & Customer Relations Bureau at 444-2758, ZIP!, or E-Mail at rharaseth@mt.gov.

Mainframe Software Update

UNIX Capability

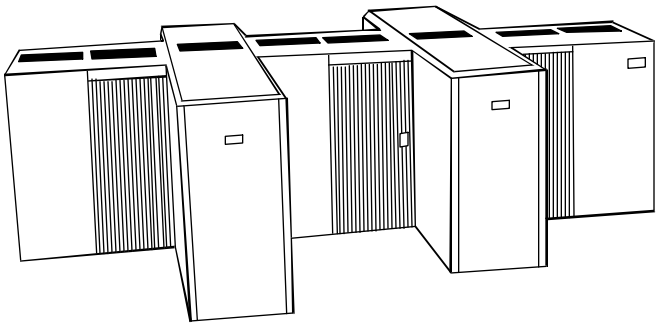
In mid 1997, ISD will install a new version of MVS/ESA, called OS/390, on our mainframe computer. In addition to maintaining and enhancing the current batch and on-line capabilities, the new operating system will be able to run a UNIX environment. This should allow agencies to develop and run portable client/server applications without the expense of additional hardware and support personnel. In addition, this capability will allow the development of applications that can migrate up or down, hardware wise, to the platform that will be most efficient.

Systems Managed Storage

There are also many upgrades to the software that will enhance the operation of existing applications and customer perceptions of the mainframe. "Systems Managed Storage," or SMS, is one of the most interesting. SMS will help automate the way that data is maintained on disk storage devices. It streamlines the allocation processes, implements a hierarchical storage environment, and creates an easy-to-use backup process for datasets.

Transitional Steps to SMS

Although the installation of this software is still several months away, there are a few steps that can be taken now to ease the transition to this new storage environment. The easiest of these changes involve system determined blocksizes and JCL (Job Control Language) simplification. Both of these features have been available for use since we originally implemented MVS/ESA.



System determined blocksizes

Implementing system determined blocksizes is easy — just remove the blocksize parameter, or don't code it at all, when you allocate a dataset. This will allow the system to use your logical record length and the disk

device characteristics to choose the optimal blocksize for your dataset. This relieves your need to know the disk device geometry, and the corresponding formula, to calculate the correct blocksize for the device. You can also use system determined block size in TSO by setting the blocksize field to blank.

Why would you want to do this? One word — "COST." By using the system-selected blocksize, you are maximizing your use of disk space and minimizing the number of I/Os that are performed against the dataset when you read or write it. Since disk space and number of I/Os are part of the input to the computer billing system, using an optimal blocksize value will reduce your agency's monthly bill. The size of the reduction depends on what blocksizes you currently use. One word of caution: if the system chooses a larger blocksize, your region size (amount of computer memory) will also increase. If you are close to using all of the storage indicated by your region parameter, you will need to increase this value.

JCL simplification

This is a second area where we can begin to prepare for the transition to SMS. Several subparameters of the DCB parameter have been promoted to be full DD statement parameters. This simplifies the JCL statements and reduces the chance for keying errors.

For example, consider the following DD statement:

```
//ddname DD DSN=mydataset,
//             DCB=(RECFM=fb,LRECL=80,BLKSIZE=1600), .....
```

It can be simplified and coded as:

```
//ddname DD DSN=mydataset,
//             RECFM=fb,LRECL=80, ....
```

The new DD statement requires 19 fewer keystrokes and thereby eliminates 19 chances for a mistyped character. And since it also uses a system determined blocksize, expect the bonus of reduced monthly billing charges. That is definitely a "WIN WIN" situation.

Look for future articles on the features of OS/390 in coming *News & Views*. For further information on mainframe software changes available today, consult IBM's *JCL Reference Manual* (available online through QUICKREF, which is explained below), or contact Craig Smith of the Computing Operations Bureau at 444-3458, ZIP!, or E-Mail at csmith@mt.gov.

Replacement for ISDINFO

A number of years ago, we added a function to ISPF (Interactive System Programming Facility) called "ISDINFO." This is function "I" from the main ISPF screen. Its purpose is to allow users to look up information unique to our mainframe, such as valid job-card account numbers, disk-space management rules, or billing rates.

By about February 1, 1997, we are going to eliminate function I. Its information will be merged into QUICKREF, another product that we have been running for several years. QUICKREF, as delivered, consists of help for industry standard topics, such as IBM JCL, utilities, programming languages, and error messages. However, information regarding other vendor products can be added under a catch-all category called "Independent Software Vendor Product Group 1." Currently, we have nine topics under this category, covering products such as Syncsort, FDR, and Computer Associates. The information from ISDINFO will be added to this group of topics. To get there:

1) Start QUICKREF, from ISPF U.Q, or by typing "QW" at the TSO ready prompt or at the command line on any ISPF panel.
2) Choose function 1 from the QUICKREF Main Menu.
3) Choose the appropriate topic with a description that reads "ISDINFO Replacement."
4) You'll now be looking at a screen that contains a number of "Items," each of which has an underscore to the left. From here, you can scroll through the items or use the FIND command to position yourself. If you're looking for billing information, "F BILL" would be a safe search argument.
5) Once you've located the item you want, type any character over the underscore and press the Enter key. This will display the text for that item. Then you can scroll through the text or use the FIND command to search for a particular word or phrase.

Although the February 1 date is firm, it is possible that not all of the items from ISDINFO will be converted by then. Any items remaining will be converted in subsequent months.

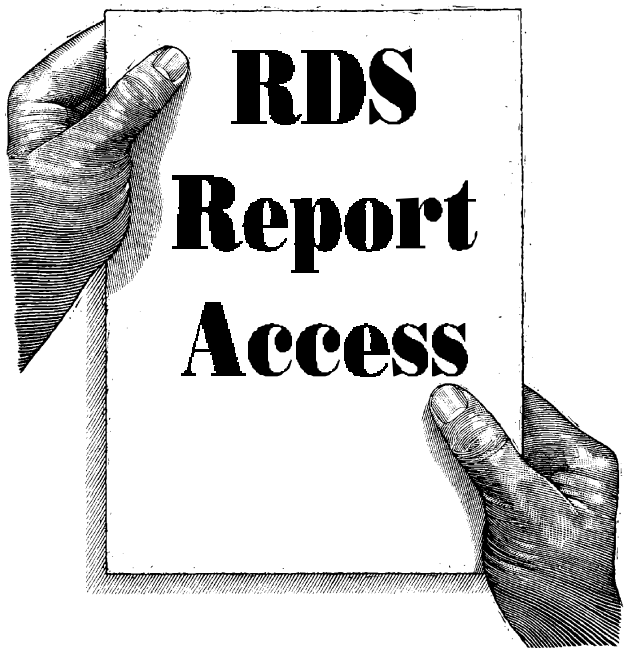
For more information, contact Buzzy Buswell of the Computing Operations Bureau at 444-2881, ZIP!, or E-Mail at bbuswell@mt.gov.

RDS Report Access

The use of INFOPAC-RDS, the automated report distribution system, continues to grow. The number of users defined as RDS "recipients" now exceeds 800, and more than 2000 reports are defined for on-line viewing, hard copy distribution, or both.

Among the most recent applications added are the CICS logs for all of the CICS regions. CICS administration personnel have asked that we make these logs available to all RDS recipients. Therefore, if you are an RDS recipient, access to these logs is only a phone call away. Just contact Dave Smith or Jan Lewis (see the end of this article for contact information), and we can give you access to these logs in a matter of minutes. If you are not currently an RDS recipient, give us a call; after asking for a little information, we'll get you set up as a recipient on RDS and provide you access to these logs.

Another group of reports that are globally available are the SBAS Information Control Core (ICC) listings. Access to these reports can also be gained through RDS. In fact, as a default, these ICC listings are added to each recipient's list of reports when the recipient is defined to RDS. So if you are an RDS recipient, the ICC listings probably appear on your report menu. Note that if you have no need or desire to see these listings, we can remove your access to them, thereby shortening your report menu.



Currently, the CICS logs and ICC listings are the only reports to which we have been authorized to grant global access. If you need access to other RDS reports, you need to contact the owner of the application to authorize that access. Some of the larger systems that currently have some or all of their reports stored in RDS include SEARCHS (System for the Enforcement and Recovery of Child Support); ISD's computer billing system; P/P/P (Payroll/ Personnel/Position Control); and CAPS (Child and Adult Protective Services).

If you would like your reports put on RDS, have RDS training needs, or require additional information, please contact these Computing Operations Bureau staff: Dave Smith at 444-2857, ZIP!, or E-Mail at dsmith@mt.gov; or Jan Lewis at 444-2901, ZIP!, or E-Mail at jlewis@mt.gov.

Portable ZIP!Office Connection Failure

When dialing into Portable ZIP!Office, you may occasionally get the error message "CONNECTION FAILED." This error will be received if the Portable ZIP!Office modem is not accepting your modem's call. If you envision a linear communication sequence in the order of PC/modem/telephone line/modem/ PC, you can see that you must have two modems between the two computers so that they can communicate over the telephone line. A modem is the unit that converts your telephone (analog) communication into something that can be understood by a computer (digital) and back again. A number of things may cause this type of trouble, including a noisy communication path, incompatible modem configurations, or a problem with the PC to which the Portable ZIP!Office modems are connected.

This last cause is the easiest to analyze and fix. The PC/server that you are dialing into is called ZIP006. If it is causing your problem, the symptom will be a "ring no answer" condition. It is always helpful to listen to your modem's signals when you are trying to connect to a remote service. If it rings and rings and rings without ever going into a high tone, you have gotten a "ring no answer." A quick boot of the remote

PC/server makes it reinitialize the series of modems that answer your call into Portable ZIP!Office. Reinitializing the modems reminds them of who they are and what they are supposed to be doing. This usually results in a successful connection to Portable ZIP!Office on your next attempt. ISD staff is available to boot the ZIP006 server seven days a week, 24 hours a day, and they can be reached by calling 444-2000. When describing your problem to the staff, mention that you are receiving the "CONNECTION FAILED" error. This will assist them in their troubleshooting and enable them to more rapidly resolve your difficulty.

If your problem is a noisy communication path or an incompatible modem configuration, booting ZIP006 will not accomplish a thing. Again, by listening to your modem, you can usually determine how far you are getting in the connect sequence. If you hear the high tone and then it drops off, the modems have refused to speak to each other. Don't bother calling ISD's Customer Support Center for this problem. They can't clear the interference on a noisy line, and they can't help you check the compatibility of your modem with the ZIP006 modem. With more than 40 modem manufacturers and each one possibly producing several models . . . well, you get the picture. Work with your LAN administrator in selecting and configuring your modem for a successful connection to Portable ZIP!Office. If you will be working on a new PC or have had any recent equipment changes, allow yourself plenty of time to test drive your Portable ZIP!Office connection before you go on the road or are in dire need of connecting.

If you have any questions concerning Portable ZIP!Office, contact Candace Hastings of End User Systems Support at 444-2858, ZIP!, or E-Mail at chastings@mt.gov.

ZIP!Tips

Daily Appointment Series

Happy New Year! And with the new year comes a blank (or almost blank) ZIP!Office calendar. This is the time when ZIP!Office users start to schedule their reoccurring daily appointments (such as Lunch hour, Off hours, and Daily report due).

Many ZIP!Office users add such an appointment as a daily series and find this appointment on every day of the calendar year — including Saturdays and Sundays. This is inaccurate and a waste of disk space. There is a way to have your daily appointments appear only on the weekdays. To add such an appointment, open your calendar and display it in a daily view. Double click on the "Appointments" line (or click on the "Add an Appointment" icon). Select the starting date and time of your appointment; fill in the description area; and then click on the Series... button (see Figure 1).

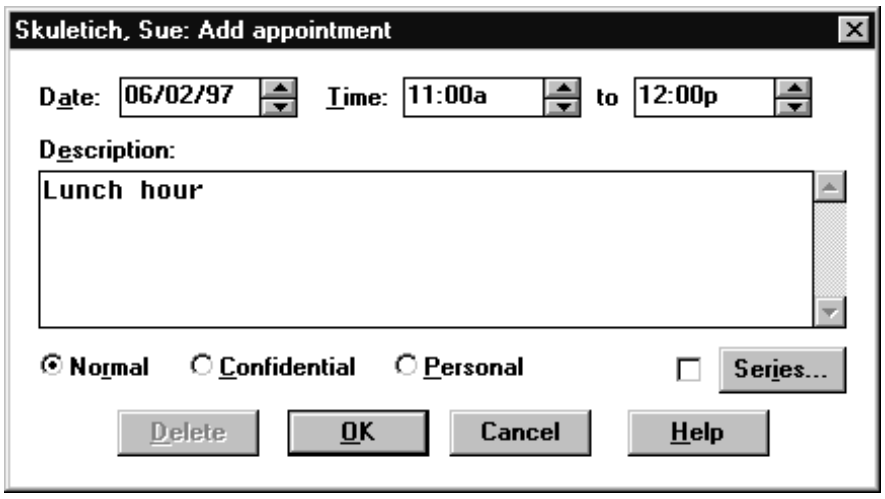


Figure 1: "Add Appointment" Window

Enter the correct Start date and End date. The Series box will default to the Daily cycle (see Figure 2). Click on the Weekly... radio button.

Figure 2: "Series" Window

In the "Weekly" window, mark the Monday through Friday buttons and click OK (see Figure 3). This brings you back to the "Add appointment" window. Click on OK to accept the series appointment. To verify the results of this series appointment, change to the monthly view of your calendar. None of this "series" should appear on Saturday or Sunday.

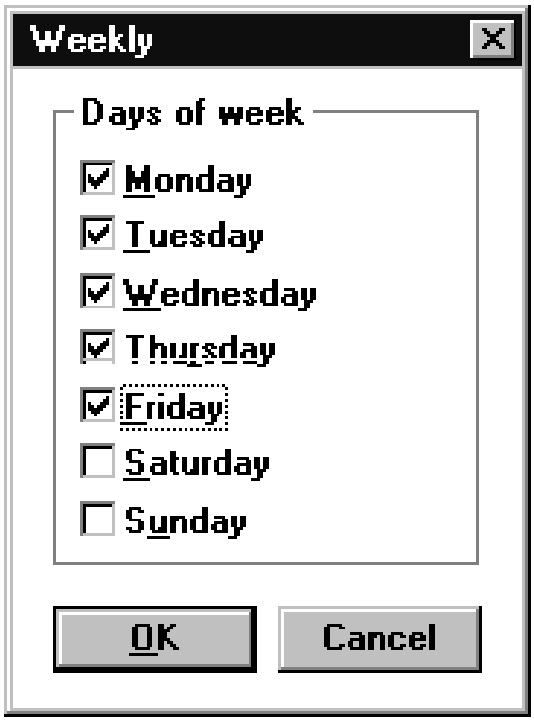


Figure 3: "Weekly" Window

If you have any ZIP!Office questions, please contact Sue Skuletich of End User Systems Support at 444-1392, ZIP!, or E-Mail at sskuletich@mt.gov.

Using QuickLists in WordPerfect for Windows

Organizing files into directories and subdirectories is a good management practice, but remembering the exact path and directory names can be difficult. Because you can use QuickList to assign a descriptive name to a directory, this feature eliminates the need to remember some of these path names. Rather than typing C:\FORMS, for example, you can select the QuickList entry for *Company Forms*.

You can also use the QuickList feature to quickly display a particular group of files. For example, you might create a QuickList entry for all of the letters to a certain client and another entry for all of the notices. Figure 4 shows examples of QuickList entries. Certainly, QuickList is a powerful tool you should learn. You can save time (and frustration) by using the QuickList entries to display files, rather than typing long — and often forgotten — path names.

Directory/File Name

C:\OFFICE\WPWIN\TEMPLATE
C:\FORMS
A:
C:\NEWACCTS\TAYLOR*.LTR
C:\NEWACCTS\TAYLOR*.NOT
C:\CALENDAR*95.TRN

Figure 4: Examples of QuickList Entries

Displaying and Using the QuickList

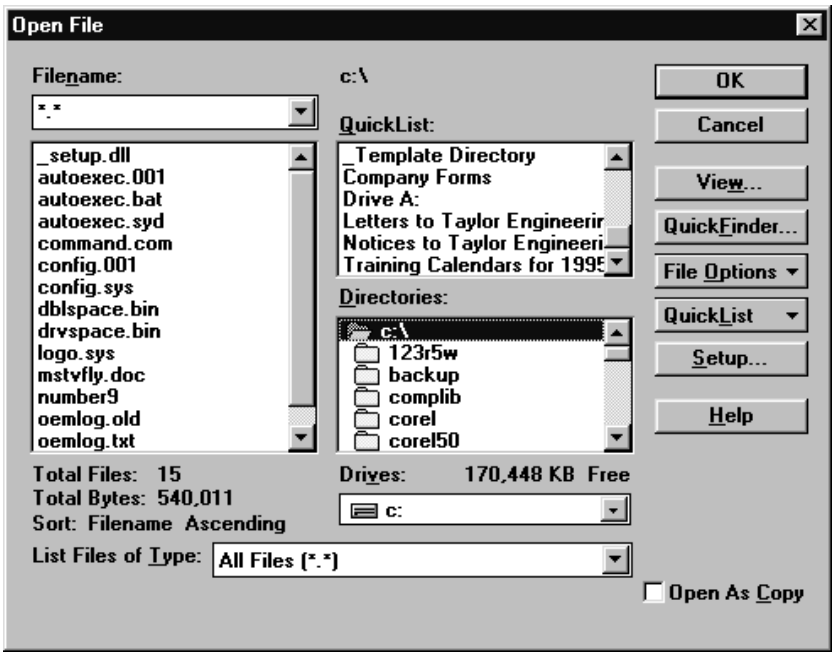
Directory dialog boxes (File Open) have a QuickList button that opens a pull-down list of options to display the directory list, the QuickList, or both lists. (The WordPerfect default is to display both lists.) There are also options to add, edit, delete, and print QuickList entries. Choose QuickList from a directory dialog box; then choose Show QuickList, or Show Both, to display the QuickList (see Figure 5).

The QuickList replaces the Directory List in the dialog box unless you choose to Show Both, in which case both of the lists are split in half to share the space.

Tip: You can open a QuickList pull-down menu of options by pointing at the QuickList and clicking the right mouse button.

The first time you display the QuickList, you may have entries for the WordPerfect program files. These entries were created when the program was installed. Items displayed in your QuickList will appear in alphanumeric order. You may use a special character, such as an underscore (_), to cause an item to appear at the top of your QuickList.

Figure 5: "Open File" Dialog Box with QuickLists



To display the list of files for a QuickList entry, double-click the entry; or highlight the entry and choose OK. The new directory name is displayed at the top of the directory dialog box, and the new list of files appears in the Filename window.

Adding QuickList Entries

You may add as many QuickList entries as you need. Any directory (or group of files) on any drive may be referenced by a QuickList entry. You may even create a QuickList entry for a directory that hasn't been created yet.

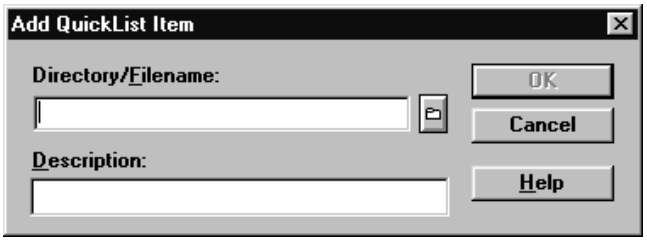


Figure 6: "Add QuickList Item" Dialog Box

To add a QuickList entry, choose QuickList from a directory dialog box. First, choose Show QuickList, or Show Both, to display the QuickList in the dialog box. Second, choose QuickList again, and then select Add Item to display the "Add QuickList Item" dialog box (see Figure 6). Type in the name of the directory, or group of files, and a description for the QuickList

QuickList Description

_Template Directory
Company Forms
Drive A:
Letters to Taylor Engineering
Notices to Taylor Engineering
Training Calendars for 1995

entry; then choose OK.
Note: If you use a directory name that does not exist when creating or editing a QuickList entry, WordPerfect stops and displays a message indicating that the directory does not exist. If you choose to use the directory name anyway, WordPerfect creates the QuickList item. If you choose not to use the name, WordPerfect returns to the Directory/Filename text box so that you can type another name.

Editing or Deleting QuickList Entries

As your files and directories change, so must the QuickList entries. QuickList entries can only be edited or deleted if the QuickList is displayed. Choose QuickList, and then select Show QuickList or Show Both. Select the entry in the QuickList, choose QuickList, and then choose Edit Item. Make the necessary changes in the Directory/Filename or Description text boxes, and then choose OK.

To delete a QuickList entry, select the entry in the QuickList, choose QuickList, and then choose Delete Item.

Printing QuickList Entries

The ability to print your QuickList entries is a new feature in WordPerfect 6.1 for Windows. To print a hard copy of your QuickList, choose QuickList, and then select Print QuickList.

If you have any questions about using QuickLists, please contact Irvin Vavruska of End User Systems Support at 444-6870, ZIP!, or E-Mail at ivavruska@mt.gov.

SAS Tip: Accessing RDBMS Data Greater Than 200 Bytes

Currently the maximum length of a character variable in the SAS System is 200 bytes. (SAS is planning to increase this maximum length in the next major release.) But when working with relational database management systems (RDBMS) like Oracle, the length of a character variable is not limited to 200 bytes. Using the SAS/ACCESS software, you can retrieve Oracle character data (exceeding 200 bytes) in smaller units for storage as a SAS variable. (Note: SAS/ACCESS is an additional module that is not part of the base system.) As demonstrated below, one method is to use the SQL Procedure Pass-Through Facility:

```
libname libref 'SAS-Data-Library'

proc sql;

  connect to oracle
    (User=oracle_userid orapw=oracle_password);
      Create table libref.dataset as select var1,
        Var2 from connection to oracle
          (Select substr(longdata,1,200),
            Substr(longdata,201,50) from
              Oracle_table)

disconnect from oracle;
quit;
run;
```

The key requirement in the PROC SQL Pass-Through code is to use the appropriate RDBMS function to return the specified parts of the RDBMS character string. In the above example, the appropriate function is called 'substr.'

For more SAS news and information, contact Jerry Kozak of End User Systems Support at 444-2907, ZIP!, or E-Mail at jkozak@mt.gov.

Shortcuts in Windows 95

A shortcut is defined as a shorter, faster method of getting from point A to point B. In Windows 95, a shortcut is essentially a pointer to an executable program, drive, or printer. These shortcuts can be placed either on the user's desktop or in a folder. To view where your shortcuts are stored on the Desktop, go to the Desktop folder located under your Windows (or Win95) directory.

Shortcuts may be created in two ways: 1) right click on the Desktop and choose File, New, Shortcut or 2)

in Explorer, right click and drag the file to the desk top, let go of the button, and click create shortcut here.

As mentioned earlier, shortcuts can be created either on the Desktop or in a folder. To place a shortcut in a folder, choose File, New, Shortcut; or right click and drag the file to either the Desktop or the destination folder.

Let's walk through the steps necessary to create a shortcut to a program and place it in the Windows Startup group. For those of you unfamiliar with the Startup group, it is the folder where all of the shortcuts are placed for those programs you wish to execute when Windows first starts (for example, the appointment notification and mailbox check for ZIP!Office). The Startup group is located in the Startmenu\Programs\Startup folder located under your Windows (or Win95) directory. Our program is a batchfile that we wish to execute every time Windows 95 starts.

After creating the batchfile, name it Example.bat and save it under c:\example.bat. Start Explorer; go to the Windows (or Win95) Start Menu\Programs\Startup folder; and choose File\New\Shortcut. In the Command line, type C:\Example.bat; choose OK; and your shortcut will be created.

Remember, a shortcut is only a pointer to the actual file. If you delete a shortcut, there is no need to worry since your actual file remains unchanged. If desired, simply recreate a new shortcut. If you have any questions regarding shortcuts, contact Brian Divine of End User Systems Support at 444-2791, ZIP!, or E-Mail at bdivine@mt.gov.

RUPL2 and COA32 — More Windows 95 Freebies

RUPL2

Version 2 of RUPL (Recently Used Program List) is an upgrade of the utility published in the August 1996 *PC Magazine* Utilities column. RUPL2 lets you put the Recently Used menu on either the Programs menu or the Start menu. It also comes with a configuration utility that eliminates the need to use RegEdit for configuration. The following are excerpts from the RUPL 2.0 readme.

To install RUPL2, simply create a folder for it on your hard disk and copy the program files (RUPL.EXE, RUPLLIB.DLL, and RUPLCFG) to that folder. Then create a shortcut to RUPL.EXE in your Startup folder and restart your system. Like its predecessor, RUPL2 stores user-configurable program settings in the registry — the system-wide database that stores user preferences and other non-volatile data for the operating system and the applications that it hosts. A new utility called RUPLCFG lets you alter configuration settings without having to use RegEdit, which can be a dangerous and error-prone process. To run RUPLCFG, double click on RUPLCFG.EXE from within Explorer. Besides changing the location of the Recently Used menu, there are three additional configuration changes you can make with RUPLCFG: 1) change the number of program names that appear in the Recently Used menu; 2) assign your own descriptive program names to applications added to the menu; and 3) prevent certain applications from showing up in the Recently Used menu altogether. To change the maximum number of program names displayed in the Recently Used menu, enter a value in the box at the bottom of the RUPLCFG window. The default is 15, but you can enter any value from four to 64.

Before it adds an entry to the Recently Used menu, RUPL2 attempts to convert the program's EXE name into a more descriptive program name such as "Microsoft Word" or "CompuServe Information Manager." If it can't generate a descriptive name, it adds the EXE name to the menu. To assign your own descriptive program name to be used in place of an EXE name or a default descriptive program name, add the EXE name and the corresponding descriptive name to RUPLCFG's "Descriptive Program Names" box. The method for doing so is simple. Click New to create a new entry; then enter the requested information in the ensuing dialog box. To edit an

existing entry, click once to highlight it and then click the Change button. To get rid of an entry altogether, highlight it and click Delete.

Sometimes it's useful to exclude a program from the Recently Used menu. Maybe it's a program that you don't run very often and don't want taking up valuable real estate in the menu. Or maybe it's a "helper" program that shows up in the Recently Used menu by mistake. (RUPL2 tries to weed out programs that are launched by other programs, but its efforts are not 100 percent successful.) You can tell RUPL2 to ignore an application by adding its name to the Excluded Programs list. If you add WORD.EXE to the list, for example, Microsoft Word won't be added to the Recently Used menu any more.

After you enter configuration changes with RUPLCFG, click the Apply button to apply the new settings. You don't have to restart the system to make the changes take effect. If you change your mind about some of the changes you've entered, you can cancel out by clicking the Close button and answering no when RUPLCFG asks if you'd like to apply the changes before closing.

COA32

COA32 (Change of Address/32) is a 32-bit Windows version of the popular *PC Magazine* utility COA, which is for 16-bit Windows. COA32, which runs under Windows 95 and Windows NT 3.51 or higher, lets you change the drive or directory of a Windows program without having to reinstall the program. It works by searching for all of the references to the old path and updating them to reflect the new path. The following are excerpts from the COA32 readme.

To install COA32, simply copy the files (COA32.EXE, COA32.HLP, and COA32.CNT) to a directory (or folder) on your hard disk. You may wish to place a shortcut to COA32.EXE in one of your Start menu folders. Or, since this is a utility you'll use only occasionally, you may prefer to run it from the Start menu's Run option. COA32 uses a wizard-like interface that walks you through each step of the process. Start by entering the old and new address strings in the boxes on the first page. Each edit line is followed by buttons for browsing folders and files. You'll have a chance to make changes to the new address after you've seen the items found by COA32 for updating. Note that COA32 ignores upper and lower case when searching for the old address. The button above the address lines will display a green light (no problems), yellow light (warning), or red light (possible problem). Press this button for an explanation. On the next page, you select which INI files you want COA32 to search.

As COA32 searches, its cursor changes to an hourglass. When the search is complete, it displays the items found for your review. You can go through this list and select items that COA32 should not change; this is done by changing the green-light Y icon to a red-light N icon. When you're done making your selections, press Next. This page gives you the opportunity to save the list of references to the old address. Press the Save List button to store the Y-marked items from the list, in table form, within an RTF (Rich Text Format) file. You can view or edit this file using almost any Windows word processor. The next page, titled Search Complete, displays the old and new address strings once more, and gives you one last chance to change the new address. Once all of the replacing action is complete, COA32 displays its Done page, which is dominated by the activity log. It's extremely important that you review the log, since it lists any problems COA32 encountered. You'll want to press the Save Log button to dump the activity log to a text file.

If you would like a copy of RUPL or COA32, the files are available on the ISD Value Added Server (VAS) at:
doa_vas_001\sys:guest\windows\winaddon\95addons\rupl
and
doa_vas_001\sys:guest\windows\winaddon\95addons\coa32.

If you don't have access to the VAS, or have questions about it, contact Denny Knapp of End User Systems Support at 444-2072, ZIP!, or E-Mail at dknapp@mt.gov.

Windows 95 — Establishing a Dial-up Networking Connection to a Remote Server

Necessary Steps

The steps necessary to make a dial-up networking connection to a remote server include:

- installing a modem,
- installing dial-up networking,
- creating a connection,
- configuring the connection,
- verifying network protocols, and
- connecting to the remote server.

Needed Information

Before beginning to create a dial-up networking connection to a remote server, you must know the:

- remote server's phone number;
- the network protocols installed on the remote server;
- the type of remote server you want to connect to, such as Windows for Workgroups; NetWare Connect (NRN); Windows 95; Mainframe (VT100); or Internet (PPP); and
- the remote server's computer name.

Installing a Modem

If a modem has not been installed and configured on your computer, you must install one by following these steps:

1) Click Start; click Settings.
2) In Control Panel, double-click Modems, and click on Add.
3) Follow the instructions in the Install New Modem Wizard; Windows 95 will basically install the modem for you without any problems.

Installing Dial-Up Networking

If dial-up networking is not on your computer, follow these steps:

1) In Control Panel, double-click Add/Remove Programs.
2) On the Windows Setup tab, click Communications, and then click Details.
3) Click the Dial-Up Networking check box to select it, and then click OK.
4) Click OK.
5) Follow the instructions on the screen. When you are prompted to restart your computer, do so.

Creating a Connection

To create a dial-up networking connection, follow these steps:

1) Double-click the My Computer icon, and then double-click the Dial-Up Networking icon.
2) Double-click Make New Connection.

Notes: If you have not created a connection previously, the Make New Connection Wizard starts automatically.

If you have not installed a modem in Windows 95, the Install New Modem Wizard appears. Follow the instructions to install a modem.

3) In the "Type a name for the computer you are dialing" box, type a name for the connection. Verify that the correct modem is selected, and then click next.
4) Type the area code and telephone number for the connection, select the appropriate country code for the remote server you are dialing, and then click next.
5) Click Finish to add an icon for this connection to the Dial-Up Networking folder.

Configuring the Connection

To configure the new connection, follow these steps:

1) Use the right mouse button to click the new connection, and then click Properties on the menu that appears.
2) Click Server Type and configure the settings to match the remote server.

Note: It is usually best to leave the Advanced Options settings alone; change settings only if you are having problems connecting to the server.

3) Select the network protocols in use on the server.
4) Click OK, and then click OK again.

Verifying Network Protocols

To determine which network protocols are installed on your computer, follow these steps:

1) In Control Panel, double-click Network.
2) View the protocols listed in the "The following network components are installed" box.

If you need to install a network protocol, follow these steps:

1) In Networking Properties, click Add.
2) Click Protocol, and then click Add.
3) In the Manufacturer box, click Microsoft. In the Network Protocols box, click the protocol you want to install, i.e. TCP/IP, and then click OK.

When you connect, a window appears stating that you are connected to the server you specified. This window also shows the speed and duration of the connection. Note that if you use Network Neighborhood to view the network after you connect, it may take a long time to build a browse list (depending on the size of the network to which you are connecting). Also, you see a browse list only if the server you connect to is connected to a LAN.

So for those of you who need to connect to a remote server, you will find that Windows 95 simplifies the task of installation, as well as the use of your dial-up networking connection.

For more information about dial-up networking techniques, contact Pete Mattison of End User Systems Support at 444-9505, ZIP!, or E-Mail at pmattison@mt.gov.

"There is no reason for an individual to have a computer in their home."
- Ken Olsen, DEC, 1977

Dell Introduces a New Line of Corporate Pentium PCs

Dell has announced a new line of network-ready PCs that combine Intel Pentium processors with faster networking, Universal Serial Bus (USB) support, and Dell's new environmentally friendly OptiFrame chassis. Immediately available, the new Dell OptiPlex Gs and OptiPlex GXi will replace the existing OptiPlex G and GX models. The replacement models build on the same reliable architecture and add new features such as integrated 3Com 10/100Mbps integrated networking, Self-Monitoring Analysis Reporting Technology (SMART), and USB support. These new business features help Dell's customers reduce their total cost of ownership through better performance and improved systems management.

The Dell OptiPlex Gs and GXi are offered with Pentium processor speeds ranging from 133 to 200MHz. Also, both products are available with factory-installed Microsoft Windows 95 or Windows NT 4.0 Workstation.

The OptiPlex's new chassis, the OptiFrame, is made of 100 percent recyclable materials and incorporates a new design that makes PCs easier to service and upgrade. These enhancements enable Dell customers to extend the life of their PCs and reduce the future waste of discarded computers. Customers can choose between low-profile and mid-size versions of the OptiFrame chassis.

The OptiFrame chassis enables the OptiPlex Gs and GXi to sit on a desktop or as a floor-standing tower, thereby giving customers the freedom to arrange their PCs to suit their work environment. To open the chassis, users must only press a button, located on the left and right side of the chassis, and lift. Inside, they'll find a lever-accessed card cage, a hinged power supply, and single-screw access to the motherboard, making these PCs some of the most advanced, highly serviceable ones ever built.

For more information about these and other products, contact Scott Mangum of Dell at 800/274-7799 x66226.

Training Calendar

This schedule has been assembled by the Helena College of Technology of the University of Montana. If you have any questions about enrollment, please call 444-6821. All classes will be held at the Helena College of Technology at 1115 N. Roberts. Please note that these costs are subject to change each July 1.

To enroll in a class, **you must send or deadhead an enrollment application** to the State Training Center, HCT, Helena, MT 59601. If you have questions about enrollment, please call 444-6821. *Once you enroll in a class, the full fee will be charged UNLESS you cancel at least three business days before the first day of class.* HCT is also willing to schedule specific classes by request from state agencies.

	DATES	COST	LENGTH
Database Classes			
Intro. To Oracle(New Version)	February 18,19	170.00	2
Prereq. Intro to Windows	April 14,15		
Intro. To SQL(New Version)	February 24,25	170.00	2
Prereq. Intro to Oracle (New Version)	April 21,22		
Oracle Developer 2000, Part I(New Version)	March 3,4,5	255.00	3
Prereq. Intro to SQL	April 28,30		
PL/SQL Programming(New Version)	March 17,18	170.00	2
Prereq. Oracle Developer 2000, Part I			
Oracle Developer 2000, Part II(New Version)	February 3,4, 5	255.00	3
Prereq. PL/SQL Programming	March 24,25,26		
Designer 2000	March 31 - April 11 (1/2 days)	425.00*	5
		*Plus materials	
Lotus Approach	March 26	85.00	1
Prereq Intro to Windows	April 14		
Int. Lotus Approach	April 28	85.00	1
Prereq. Lotus Approach			

Please Note the Changed Oracle Sequence Starting January 1997 — All classes are listed in order of the required prerequisites.

If you are missing a course(s) from the former sequence, we will make arrangements to fit you into the new sequence.

Introduction to Oracle 2 Days
- Relational Database Theory
- Modeling
- Client/Server
- The Oracle Architecture

Introduction to SQL 2 Days

Oracle Developer 2000, Part I 3 Days
- Forms
- Reports
- Graphics

PL/SQL Programming 2 Days
- SQL Programming
- Functions
- Procedures

Oracle Developer 2000, Part II 3 Days
- Advanced Forms
- Advanced Reports

Oracle Designer 2000 5 Days

Data Network/Mainframe Classes

NONE

Microcomputer Classes

Introduction to Windows	February 6	85.00	1
	March 6		
	April 2,3 (1:00 - 4:30)	85.00	1
Windows 95 Conv.	February 25 am	42.50	1/2
Prereq. familiar with Windows	March 21 am		
	April 16 am		
Windows 95	March 5	85.00	1
	April 9		
ZIP!Office	February 20 pm	Free	1/3
Prereq. Intro to Windows	March 7 am		
	April 10 pm		
Intro. to Internet	February 13 am	42.50	1/2
Prereq. Intro to Windows	March 7 pm		
	April 1 pm		
Internet	February 6,7	170.00	2
Prereq. Intro to Windows	April 17,18		
HTML	February 20,21	170.00	2
	February 10,11 **NEW**		
	March 19,20		
	April 29,30		
WordPerfect 6.1 for Windows	February 10,11	170.00	2
Prereq. Intro to Windows	April 23,24		
WordPerfect 6.1 Conv. Windows	February 24	85.00	1
Prereq. Intro to Windows	March 18		
Desktop Publishing W/ WP 6.1	March 19,20	63.75	1 1/2
Prereq. WP 6.1 for Windows			
WP 6.1 Tables & Merge	April 23 am	42.50	1/2
Prereq. WP 6.1 Conv			
Lotus for Windows	February 18,19	170.00	2
Prereq. Intro to Windows	April10,11		
Lotus Conv. for Windows	February 12	85.00	
Prereq. Intro to Windows	March 27		
Lotus Macros	February 26	42.50	1/2
Prereq Lotus Conv. to Windows			

Prerequisites may be met with consent of Instructor.

ISD Class Enrollment Application

COMPLETE THIS APPLICATION IN FULL **AND RETURN IT** AT LEAST ONE WEEK PRIOR **TO THE FIRST DAY OF CLASS**

COURSE DATA

Course Request: _____

Date Offered: _____

STUDENT DATA

Name: _____

Soc. Sec. Number (for P/P/P): _____

Agency & Division: _____

Mailing Address: _____

_____

Phone: _____

How have you met the required prerequisites for this course? Explain, giving the class(s) taken, tutorial completed, and/or experience.

_____

_____

_____

BILLING INFORMATION/AUTHORIZATION MANDATORY

User ID: _ _ _ _ _ _ Agency#: _ _ _ _

Authorized Signature: _____

FULL CLASS FEE WILL BE BILLED TO THE REGISTRANT UNLESS CANCELLATION IS MADE THREE BUSINESS DAYS BEFORE THE START DATE OF THE CLASS.

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Editor's Notes

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Editorial Submissions...

To submit an article to ISD *News & Views* for publication, please send it to Trapper Badovinac, preferably via ZIP!. Please have your article in by the 8th of the month for inclusion in the following month's newsletter.

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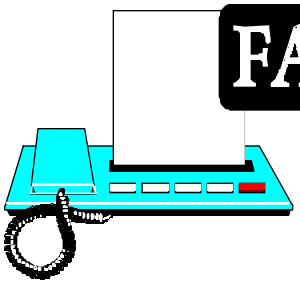

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ISD Customer Support Center...

Have a problem (opportunity)? Do you need ISD assistance for any of your information processing requirements? Then contact the ISD Customer Support Center (444-2000), which is our central point of contact.

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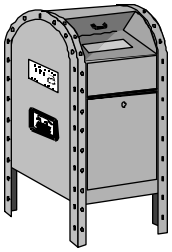

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Editor

Trapper Badovinac (444-4917), ZIP! or E-Mail at tbadovinac@mt.gov.

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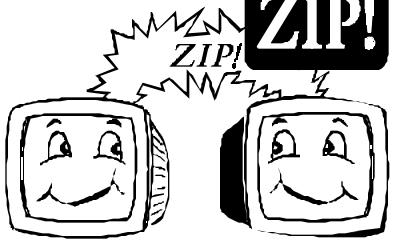

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